

<b>GEARTECH</b>	CHECKLIST	No. CK9101		SHEET 1 OF 6
		Rev. A		
Gear System Audit		BY RLE		DATE 7/05/98
		CKD JRM		DATE 7/05/98
APPLICATION DATA				
Question	Y	N	R	Comments
Customer?				
Site?				
Type of application?				
Audit conducted by?				
Date of audit?				
Other?				
DOCUMENTATION				
Question	Y	N	R	Comments
Documents available?				
Installation drawing?				
Assembly drawing of gearbox?				
Lubrication schematic?				
Lube system bill of material?				
Maintenance manual?				
Service history?				
Oil lab analyses?				
Oil change interval records?				
Filter change interval records?				
Alignment records?				
Vibration records?				
Sound records?				
Temperature records?				
Other documents?				
DRIVER NAMEPLATE DATA				
Question	Y	N	R	Comments
Driver type?				
Driver serial number?				
Power?				
Speed?				
Service factor?				
Other?				
DRIVEN NAMEPLATE DATA				
Question	Y	N	R	Comments
Driven type?				
Driven serial number?				
Power?				
Speed?				
Service factor?				
Other?				
GEARBOX NAMEPLATE DATA				
Question	Y	N	R	Comments
Gearbox type?				
Gearbox manufacturer?				
Gearbox model?				
Gearbox serial number?				
Power?				
HS shaft speed?				
LS shaft speed?				
Service factor?				
Gear ratio?				
Lubricant specification?				
Lubricant viscosity?				

<b>GEARTECH</b>	CHECKLIST			No. CK9101	SHEET 2 OF 6
				Rev. A	
Gear System Audit				BY RLE	DATE 7/05/98
				CKD JRM	DATE 7/05/98
GEARBOX NAMEPLATE DATA (cont.)					
Question	Y	N	R	Comments	
Lubricant volume?					
Temperature limits?					
Other?					
OPERATIONAL DATA					
Question	Y	N	R	Comments	
Continuous duty?					
Intermittent duty?					
Runtime/day?					
Total runtime logged?					
Other?					
ENVIRONMENT AUDIT					
Question	Y	N	R	Comments	
Record ambient temperature?					
Record relative humidity?					
Water evident?					
Corrosion evident?					
Contamination evident?					
Overheating evident?					
Adequate airflow?					
Typical start-up temperature?					
Typical running temperature?					
Other?					
FOUNDATION AUDIT					
Question	Y	N	R	Comments	
Baseplate solid?					
Mounting bolts tight?					
Driver shimmed properly?					
Gearbox shimmed properly?					
Driven shimmed properly?					
Other?					
ALIGNMENT AUDIT					
Question	Y	N	R	Comments	
Couplings per installation drawing?					
HS coupling type?					
LS coupling type?					
Date of last alignment?					
HS coupling alignment data?					
LS coupling alignment data?					
Coupling lubricant per spec?					
Date lube last changed?					
Other?					
LUBRICATION SYSTEM AUDIT					
Question	Y	N	R	Comments	
Lube system components per Bill of Material?					
Lube system plumbed per lubrication schematic?					
Lube system connections properly bolted?					
Lube system electrical connections properly made?					

<b>GEARTECH</b>	CHECKLIST			No. CK9101	SHEET 3 OF 6
				Rev. A	
Gear System Audit				BY RLE	DATE 7/05/98
				CKD JRM	DATE 7/05/98
LUBRICATION SYSTEM AUDIT (cont.)					
All openings properly sealed?					
Oil vendor correct?					
Oil type correct?					
Oil viscosity correct?					
Oil capacity correct?					
Oil level correct?					
Oil filter correct?					
Valves set so oil filter is operational?					
Oil filter clean?					
Heat exchanger correct?					
Heater correct?					
Valves set so magnetic trap is operational?					
Is magnetic trap clean?					
Breather correct?					
Breather clean?					
Dwell time $\geq$ 4 minutes?					
Suction $\geq$ 150 mm below surface?					
Return below surface?					
Suction and return separate?					
HOUSEKEEPING					
Question	Y	N	R	Comments	
Are all gearbox and lube system ports closed?					
Are oil drums properly stored?					
Are oil drum ports closed?					
Are oil drum tops clean?					
Take oil samples from drums?					
Oil transfer pump flushed with clean oil?					
Is oil transferred thru a filter?					
Is area around gearbox clean?					
Is gearbox free of debris, tools, rags, and hardware?					
Gearbox breathers installed?					
When opening ports are the following precautions followed:					
Open ports one at a time?					
Clean inspection cover & area around port before opening?					
Count inspection cover bolts before opening?					
Keep inspection cover bolts in separate containers?					
Technicians have nothing in shirt pockets?					
Flashlights & tools on lanyards?					
Ports closed immediately after inspection?					
All inspection cover bolts accounted for?					

<b>GEARTECH</b>	CHECKLIST	No. CK9101		SHEET 4 OF 6
		Rev. A		
Gear System Audit		BY RLE		DATE 7/05/98
		CKD JRM		DATE 7/05/98
GEARBOX INSPECTION				
Question	Y	N	R	Comments
Inspect exterior for following:				
Overheating?				
Corrosion?				
Contamination?				
HS shaft oil leaks?				
LS shaft oil leaks?				
Breather leaks?				
Other leaks?				
Housing damage?				
Inspect interior for following:				
Overheating?				
Corrosion?				
Contamination?				
Sludge?				
Varnish?				
Wear debris?				
Take samples of oil?				
Take samples of wear debris?				
Record bearing endplay?				
Record backlash?				
Record contact patterns?				
Photograph gear teeth?				
Failure modes (AGMA 1010):				
Cold flow?				
Hot flow?				
Indentation?				
Rolling?				
Rippling?				
Ridging?				
Root fillet yielding?				
Tip/root interference?				
Root fillet cracks?				
Profile cracks?				
Tooth end cracks?				
Nonprogressive macropitting?				
Progressive macropitting?				
Spall macropitting?				
Flake macropitting?				
Micropitting?				
Subcase fatigue?				
Adhesion?				
Abrasion?				
Corrosion?				
Fretting corrosion?				
Polishing?				
Electric discharge?				
Cavitation?				
Erosion?				
Scuffing?				
Hardening cracks?				
Grinding cracks?				
Rim and web cracks?				
Case/core separation?				

[illegible]

[illegible]